TAPPEY (E.T.)

Intraperitoneal adhesions.

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INTRAPERITONEAL ADHESIONS.*

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Abdominal surgery as it has been so extensively practiced in the last few years has established, among other things, that many of the pains, vague, uncomfortable feelings, and so-called dyspepsias, are caused by adhesions of various organs in the abdominal and pelvic cavities. The organs in these cavities are particularly liable to become adherent to one another because they all have, as one part of their peripheral structure, the peritonæum, a membrane very vascular and prone to adhesions and fibrinous exudations; and when we say that organs in these cavities are adherent we mean that the peritonæum covering them is adherent. But though it is the peritonæum in each instance that is adherent, still the symptoms caused are those that pertain to the organ covered by the adherent peritonæum. In operating, for instance, to relieve ovarian pain, we not infrequently find the ovaries themselves not much changed but bound firmly by more or less extensive adhesions; the adhesions being broken up, the pain is relieved. Of course there was an inflammatory process at some time to cause these adhesions, but in the course of time the adhesions seem to be the principal if not the entire cause of pain. I have in mind a case I operated upon several years ago expecting to find gallstones. There were attacks of pain at intervals of two or three weeks, at which times there was jaundice, and there was every reason to suspect gallstone. I found the gall bladder of normal size, and, though I could not feel stones through the walls, I incised it and explored its interior carefully. There were no stones. I found, however, extensive adhesions binding the duodenum and

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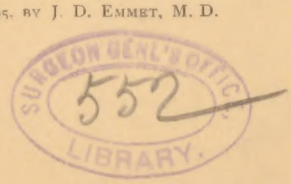

stomach to the posterior abdominal wall; then passing a probe into the duct, I found it patulous to within a short distance from the intestine, the duodenum was bound fast in such a way as to bend the duct and obstruct it, the adhesions were broken up, the wound in the gall bladder was closed, and the patient recovered, and has been quite free from pain since. Operation was done November 25, 1892. I presume there had been gallstones in this case and that the adhesions had been caused by their presence, but when I operated it was the adhesion which caused the trouble. After narrating this case to a well-known surgeon, whose name I shall not mention, he said "the stone had ulcerated through the walls of the duct or bladder and was somewhere there, else how could the adhesions be there?" I think, however, that the frequent passage of gallstones, or even their presence, with the congestion they may cause, would be sufficient explanation of the adhesions. Another frequent location of adhesions is the neighborhood of the appendix. They may be caused by inflammation of the appendix or as the result of an operation for appendicitis. Every case of laparotomy is probably followed by some adhesion of peritoneal surfaces. For example, in a recent case the operation of oöphorectomy was followed by a very severe and persistent form of cystitis and great pain in the region of the stump of the left broad ligament. Two years after the first operation the abdomen was opened again March 22, 1895, and the colon found adherent to the bladder wall and to the stump of the broad ligament, the first adhesion accounting for the persistent nature of the cystitis, it having been caused and kept up, in all probability, by the transmigration of the colon bacillus through the walls of the intestine and bladder; the pain was caused by the tension at the point of adhesion to the stump of the broad ligament. The adhesions, formed from whatever cause, may be the occasion of pain and functional disturbance, not only by tension, as mentioned above, but by the formation of internal hernia, which may become strangulated—two loops of intestine may be joined by adhesions so as to cause obstruction or in such a manner as to favor volvulus. Pain in the female pelvis is not infrequently caused by adhesions alone, so far as we can judge by the look of the organs. It is frequently the experience of the surgeon that he opens the pelvis to see what may be the cause of pain in the region of the ovaries—for he has not been able to make a diagnosis otherwise—and he finds apparently healthy ovaries, except that they are adherent. He either removes the organs or breaks up the adhesions and relieves the pain. The uterus is fixed in some

abnormal position by adhesions; they are severed and the symptoms relieved.

Riedel, of Jena, in the forty-seventh volume of *Archiv für klinische Chirurgie*, presents an exhaustive paper on this subject. He has evidently, from the number of cases he cites, had an extensive experience, and he treats the subject in a most interesting manner. He begins by stating that during the past year a great number of laparotomies have been performed on account of adhesions of the viscera, the existence of inflammatory bands in the abdominal cavity, and the kinking and narrowing of the intestines due to them. He states that most of the operations undertaken to remedy these conditions have been successful, and that the good results have remained for months and years in a number of instances. In considering this subject, one of the most obvious objections to operation would be the likelihood of a formation of new adhesions. Riedel admits that new adhesions are sure to be formed, but maintains that the symptoms caused by the original adhesions are almost invariably relieved, and my own experience is the same, though it is quite limited as far as those cases are concerned in which only adhesions have been divided and no tissue or organ has been removed. The question of diagnosis is often perplexing, and in some instances impossible without abdominal section.

Riedel mentions the following causes of adhesion in the abdominal cavity. They suggest at once the approximate locality in which they exist, except in the instances of contusion of the abdomen and of detached lipomata:

a. Contusion of the abdomen.

b. Ulcer of the stomach.

c. Inflammation about the gall bladder.

d. Inflammations about the gall bladder and ascending colon.

e. Inflammations of the gall bladder and vermiform appendix together.

f. Inflammations of the vermiform appendix alone.

g. Inflammatory processes in the colon.

h. Lipomata that have become detached from their pedicles inside the peritoneal cavity.

Besides these there are adhesions found in the pelvic cavity caused by—

1. Inflammation of the ovaries or tubes, or both.
2. Inflammation of the uterus.
3. Inflammations of and about the rectum.
4. Inflammation of the bladder.

The question of diagnosis is often perplexing and in many instances impossible without abdominal section, but there are considerations which will aid materially. Wherever there is pain, and palpation does not reveal any tumor or other enlargement, adhesions is one of the probable causes. In obstruction of the intestines, for instance, if the cause be intussusception or the pressure of a tumor or of a fæcal mass, it will be possible, very likely, to feel a mass. If, then, no mass be felt, the cause may be paralysis of the bowel, stricture, or adhesions. If paralysis be the cause, no peristaltic action of the bowels can be seen through the abdominal walls, and it can be in the case of stricture or adhesions. It would probably be impossible to distinguish between these two conditions, though there might be a sensation of greater resistance on palpation in the case of adhesion. The localization of the adhesions is of course just as difficult as and no more so than that of stricture, and will often have to be done after the abdomen is open. I believe it to be eminently proper to subject cases of chronic dyspepsia, chronic and obstinate constipation, and cases of persistent pain which is caused by accumulation of flatus, to exploratory opening of the abdomen to determine whether there be adhesions and for the purpose of severing them.